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Title: Substitution of Chicken Litter for Feed in Production of Penaeid Shrimp in Honduras

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Abstract: Two experiments were conducted in Choluteca, Honduras, to ascertain effects on yield and profitability of partial substitution of chicken litter for feed during initial growth of semi-intensively cultured penaeid shrimp. In the first experiment, four management strategies based on various combinations of chicken litter (60 kg/hectare per week, total solids) and prepared feed were tested. After 99 days of growth, shrimp yield was not increased significantly by manuring in addition to feeding, and chicken litter was not profitably substituted for feed during the first 4 to 8 weeks. Mean total yields for the nonsubstitution treatments were 7 to 41% greater than those for treatments in which chicken litter was partially substituted for feed, and net income for the nonsubstitution treatments was 27 to 58% greater than that for substitution treatments. Differences were not significant ($P > 0.05$) because of large yield variation resulting from variable survival. In the second experiment, two combinations of chicken litter at higher rates and prepared feed were tested. Low-cost chicken litter applied weekly at 220 kg/hectare was profitably substituted for high-cost feeds during the first 8 to 9 weeks of grow-out. However, chicken litter applied at low rates is an ineffective substitute for feed and would not improve yields if applied with feeds.

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